New theory for the pathogenesis of Alzheimer's disease proposed

Alzheimer's disease may be caused by inflammatory processes associated with ageing and not, as generally believed, by plaque-like deposits in the brain, a new study has found.

Scientists from the University of Southern California in Los Angeles and Northwestern University in Evanston, Illinois, said that their findings could open new avenues of exploring ways to treat or even cure the disease. Although they still laid the blame for Alzheimer's disease on a molecule called amyloid beta, they traced the basic cause of the disease to the formation of toxic proteins rather than to the build-up of plaque and tangles inside nerve cells in the brain, as traditionally believed (*Trends in Neurosciences* 2001;24: 219-24).

Many studies support the hypothesis that amyloid fibrils drive neurodegeneration in Alzheimer's disease (the amyloid cascade hypothesis), and in vivo deposits of amyloid have constituted a hallmark of the disease.

In the current report, the researchers found evidence that soluble toxins may be responsible for the poor correlation between fibrillar amyloid and disease progression, perhaps providing a unifying mechanism for the pathogenesis of Alzheimer's disease.

Scott Gottlieb *New York*

Paediatrician to be reinstated

One of the doctors who was suspended from work at North Staffordshire Hospital, Stoke on Trent, because of complaints by parents over the diagnosis of child abuse, is to be reinstated, it was announced last week.

Dr Martin Samuels, a consultant paediatrician, who was suspended in November 1999, because of complaints by parents of harassment and victimisation, has been cleared of

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"professional misconduct or incompetence" by a hospital inquiry.

Dr Samuels's colleague Professor David Southall, who was suspended at the same time, remains suspended because the allegations against him are more complicated. The trust said that the additional time taken to resolve Professor Southall's case "reflects only a greater volume of work that needs to be undertaken in his case and is not indicative of any likely outcome."

Annabel Ferriman *BMJ*

Surgeon awarded libel damages of £175 000

A consultant thoracic surgeon attacked in a television news report by *Channel 4 News* and in an ITN television programme, *Great Frauds*, accepted libel damages of £175 000 ($245 000) in an out of court settlement last week.

Channel 4 Television Corporation and the investigative journalist Duncan Campbell agreed to pay Joe Rahamim, a surgeon at Derriford Hospital in Plymouth, damages of £100 000, and ITN agreed to pay £75 000. In a statement to the High Court at Plymouth, Mr Rahamim's counsel, Ronald Thwaites QC, said that Channel 4 had broadcast a major report, produced by Mr Campbell, on their 7 pm news in July 1998, which "amounted to an unwarranted attack on Mr Rahamim."

Clare Dyer *legal correspondent, BMJ*

UK investigates possible human cases of foot and mouth disease

Susan Mayor *London*

No cases of foot and mouth disease have been transmitted from animals to humans in the current UK outbreak, despite a growing number of possible cases being reported in the media.

The Public Health Laboratory Service reported last week that in all 13 suspected cases of human foot and mouth disease the tests were negative, with none showing infection with the animal picornavirus causing the disease. One of the cases testing negative was thought to be a slaughterman from the north of England who had attracted a great deal of media coverage, although the service refused to release individual details for reasons of patient confidentiality. A further five cases are currently being tested.

The last documented human case of human foot and mouth disease in the United Kingdom was in 1967 during a previous outbreak. The farm worker affected was thought to have been infected by drinking contaminated milk. His symptoms included a mild fever, sore throat, blisters on the palms of his hands, and weals on his tongue. Traces of the foot and mouth virus were found in one tissue sample, but other samples tested negative. The man recovered within a few weeks and had no lasting health effects.

Dr David Brown, director of the enteric, respiratory, and neurological virus laboratory for the Central Public Health Laboratory, said: "Although there are documented cases of human infection with foot and mouth disease, the number of cases is extremely small. It is clearly difficult to transmit the virus from animals to humans."

He explained that anyone in whom foot and mouth disease is suspected undergoes two tests. The first is a polymerase chain reaction test, which is highly specific for the conservative regions of the virus causing foot and mouth disease. Samples are tested from throat swabs and lesions. This is followed by a second test for antibodies to the virus, during the recovery period, which provides a definitive answer as to whether infection has occurred. All of the cases tested in the United Kingdom so far have undergone only the first test.

John Oxford, professor of virology at Queen Mary Westfield School of Medicine and Dentistry in London, warned that people working with animals infected with foot and mouth should continue to be cautious: "The virus in the current outbreak is much more virulent than in the 1967 outbreak. It is replicating to higher infectious titres, providing more opportunity for the development of mutants that can jump the species barrier." He added: "The transmission of a mutant virus with some ability to infect humans is theoretically possible."

About 30 to 40 cases of foot and mouth disease in humans have previously been documented around the world, although testing and documentation may be poor in many developing countries, where the disease is common in animals. □

More information can be found at www.phls.co.uk

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